

CLAIMS

1. Lid (1) that will close a receptacle, typically intended to contain a fluid product such as a paint or a powder, to be applied manually using an instrument such as a brush, the said receptacle comprising a body (2) provided with a bottom (20) typically provided with a hollow outer part (200), a skirt (21) with an upper rim (22) delimiting an upper opening (23) with area S typically varying from 25 cm² to 2500 cm² and with its largest dimension D typically varying from 5 cm to 50 cm, and designed to be closed off by the said lid (1), characterised in that:

- a) the said lid (1) comprises a dish (4) with area S' and its largest diameter D' and a peripheral strip (5) fixed to the said dish (4) and provided with an outer edge (50) cooperating in a sealed manner with the said upper ring (22), the said area S' typically varying from 0.1S to 0.9S and the said largest dimension D' typically varying from 0.1D to 0.9D,
- b) the said dish (4) comprises a sidewall (40) and a bottom (42), a part of the said wall forming a pouring spout (41) with height H above the said peripheral strip (5), so as to facilitate pouring of the said product,
- c) the said bottom (42) comprises an orifice or a recess (43) delimited by a rim (44) and forming an opening with area S'' and its largest dimension D'', the said area S'' typically varying from 0.1S'

to 0.9S' and the said largest dimension D" typically varying from 0.1D' to 0.9D' so as to enable passage of the said instrument,

5 d) the said lid (1) comprises a manually removable closing means, typically a cap (6), designed to close off the said orifice (43), so as to be able to manually close or open the said orifice (43) as many times as necessary, typically by rotation of the said removable closing means.

10 2. Lid according to claim 1 in which the said removable closing means comprises a means of fixing (60) to the said dish (4) or to the said peripheral strip (5), the said fixing means (60) being either permanent or removable.

15 3. Lid according to claim 2 in which the said fixing means (60) is permanent and includes a flexible tab (61) typically forming a single piece part with the said dish (4) or with the said peripheral part (5).

20 4. Lid according to claim 2 in which the said fixing means (60) includes a flexible tab (62), or a rigid arm (63), fitted with an end (64) comprising means of cooperation (65) with the said dish (4) or with the said peripheral strip (5), typically by bonding or click fitting, so as to form a permanent or typically removable
25 fixing means depending on the case.

5. Lid according to claim 4 in which the said click fitting means forming the said cooperation means (65) includes male or female parts, one being fixed to the said removable closing means (650), the other (450) being

fixed to the said dish (4) or the said peripheral strip (5).

6. Lid according to any one of claims 2 to 5 in which the said fixing means (60) forms a hinge (10) for the said cap (6).

7. Lid according to any one of claims 1 to 6 in which the said dish (4) or the said peripheral strip (5) or the said cap (6) includes a horizontal positioning means (7), typically a stop, such that when the said cap (6) is open, its inner surface (66) forms a typically horizontal plane (70) and this avoids running of the said product sticking to its inner surface.

8. Lid according to any one of claims 1 to 6 in which the said dish (4) typically forms a vertical positioning means, typically due to the said sidewall (40), or inclined at an angle $> 90^\circ$ such that when the said cap (6) is open, its inner surface (66) forms a vertical or inclined plane, enabling the product to flow towards the said orifice and also providing a wiping surface for the said instrument.

9. Lid according to claim 1 in which the said sidewall (40) includes parallel slides (403) and a recess (404) to enable translation of a drawer sealing means (69) comprising a handle on the outside of the said dish.

10. Lid according to any one of claims 1 to 9 in which the said dish (4) includes a bar typically passing through the said orifice (43) so as to form a wiping bar (46) for the said instrument.

11. Lid according to claim 10 in which the said wiping bar (46) forms a partition of the said orifice (43), a main part (430) of the said orifice being intended for passage of the said instrument, a secondary
5 part (431) adjacent to the said pouring spout being designed to allow flow of the said product when the said product is transferred.

12. Lid according to claim 11 in which the said secondary part (431) has a typically triangular section
10 with a vertex forming part of the said pouring spout (41).

13. Lid according to either claim 11 or 12 in which the said secondary part (431) is closed off by a possibly removable grid (47).

15 14. Lid according to any one of claims 1 to 13 in which the height H of the said part of the sidewall (40) forming the said pouring spout (41) varies from 5 mm to 30 mm and is typically located at a distance d from the said upper rim (23) varying from 1 to 50 mm.

20 15. Lid according to claim 14 in which the said pouring spout (41) includes a bi-stable flexible tab (412) in the folded down position when the said lid (1) or the said receptacle fitted with the said lid forms a stack, in the extended upwards position so that the said
25 product can be transferred, the said pouring spout (41) having a thinned upper end (411), with a flexibility and radius of curvature R adapted so as to obtain a tab (412) with two stable positions, so that when the said tab is

extended, the height $H' > H$ and is equal to at least 1.30 H.

16. Lid according to any one of claims 1 to 15 in which the part of the said wall (40) forming the said pouring spout includes an inner surface (410) forming an angle of less than 90° with the horizontal plane, and typically varying from 45° to 75° , to facilitate transfer of the said product.

17. Lid according to any one of claims 14 to 16 in which the said sidewall (40) includes a so-called "top" part (400) with height H comprising the said pouring spout (41), the said wall having a length or size L, so as to form a stacking means (8) of the said lid forming a thickness shim for stacking the said lid in a stack (3) and / or the said receptacle in a stack after it has been filled and closed by the said lid.

18. Lid according to claim 17 in which the said wall (40) includes a so-called "bottom" part (401) with height H, particularly to enable or facilitate the said rotation or access to the said orifice (43).

19. Lid according to any one of claims 1 to 18 in which the said bottom (42) is a bottom (420) inclined towards the said rim (44) like a funnel, such that the said fluid product that drops inside the said dish (4) or onto the said bottom (42) can flow by gravity towards the said orifice (43) and thus drop into the said body (2).

20. Lid according to any one of claims 1 to 19 in which the said rim (44) comprises an inner projection (440) delimiting the said orifice (43), so as to

typically cooperate with the said cap (6) particularly by forming an axial and / or radial stop for the said cap (6).

21. Lid according to any one of claims 1 to 20 in
5 which the said orifice (43) has a horizontal profile or periphery comprising at least one straight portion and at least two angular portions with radii of curvature R1 and R2, such that the said rim and / or the said projection may be used as a wiping means for a flat brush and for
10 two round brushes with radii of curvature typically equal to approximately R1 and R2 respectively, where R1 and R2 typically vary from 5 mm to 50 mm.

22. Lid according to any one of claims 1 to 21 in which the said peripheral strip (5) includes an auxiliary
15 stacking means (80) for the said lids (1), typically formed by one or several pads or elements in relief, typically with the same height H above the said peripheral strip (5) as the height of the said top part (400) or the said pouring spout (41) and at a distance
20 equal to at least D/2 from the said pouring spout in an average horizontal plane of the said peripheral strip, such that in particular the said lids (1) can be put into a stable stack (3) of lids (1) or receptacles (2) fitted with the said lids.

23. Lid according to claim 22 in which the said
25 auxiliary stacking means (80) also forms the said vertical positioning means (7).

24. Lid according to either claim 22 or 23 in which the said upper part (400) of the said dish and the said

element in relief (80) have the same height H, so as to give an upper stacking plane (81) that is horizontal, the said height H typically being chosen to be equal to at least the depth H' of the said hollow outer part (200),
5 and form or comprise at least three parts at their periphery or radial end forming the radial stops (402, 82) that will cooperate with the said outer hollow part, so as to prevent any radial displacement of one receptacle with respect to another in a stack and thus
10 increase its stability.

25. Lid according to any one of claims 22 to 24 in which the said element in relief (80) and the said peripheral strip (5) form a single piece part.

26. Lid according to any one of claims 22 to 24 in
15 which the said element in relief (80) and the said dish (4) form a single piece part.

27. Lid according to any one of claims 22 to 24 in which the said element in relief (80) and the said cap (6) form a single piece part.

20 28. Lid according to any one of claims 1 to 27 in which the said dish (4) and the said peripheral strip (5) form a single piece part, typically a plastic moulded or thermoformed part.

29. Lid according to any one of claims 1 to 27 in
25 which the said dish (4) and the said peripheral strip (5) form two parts fixed by an assembly means, typically using an external projection (48) from the said dish (4), so as to form a typically sealed junction area (11).

30. Lid according to claim 29 in which the said dish (4) forms a part made of plastic, and the said peripheral strip (5) forms a metallic or annular metalloplastic part with an inner edge (51) fixed to the said dish (4) or to the said outer projection (48), typically by crimping, bonding, click fitting or insert moulding.

31. Lid according to either claim 29 or 30 in which when the said dish (4) and the said peripheral strip (5) are composed of different materials, the said assembly means forming the junction (11) is a reversible assembly means, so as to enable subsequent separation of the said dish and the said peripheral strip to enable recycling of the materials from which the said lid is made.

32. Lid according to any one of claims 1 to 31 in which a closer (9) covers or closes at least the said orifice (43), the said closer (9) typically being a closer made of a barrier material for the said product, the said closer (9) typically heat sealed to the said lid (1), having to be removed or torn off the first time that the said lid (1) is opened.

33. Lid according to either claim 29 or 30, and according to claim 30 in which the said closer (9) is a closer heat sealed on the inner surface (13) of the said lid and extends beyond the said dish and seals the said junction area (11) between the said dish (4) and the said peripheral strip (5).

34. Lid according to claim 33 in which the said closer (9) comprises at least one line of weakness (90) typically running along the said orifice, such that when

manual pressure is applied on the said closer (9) at the time of the first opening, for example with the said instrument, the said closer (9) tears so as to provide access to the said product, the said torn off closer
5 folding inside the said body.

35. Lid according to either claim 29 or 30, and according to claim 30 in which the said closer (9) is a heat sealed closer on the upper surface of the lid and typically on the surface (441) of the said inner
10 projection (440), the said closer comprising a gripping tab (91) that is typically used to separate the closer (9) from the lid (1).

36. Lid according to any one of claims 1 to 35 in which at least the said dish (4) is composed of a moulded
15 or thermoformed part made of a thermoplastic material, typically PE, PP, PET, PVC or PA, chosen with a nature and thickness to have firstly the mechanical properties and secondly gas barrier properties required for use and an adapted chemical resistance to the said product.

20 37. Lid according to any one of claims 1 to 36 in which the said outer edge (50) of the said peripheral strip (5) has a profile capable of cooperating with the said upper rim (23) of the said receptacle (2) to be closed, typically by crimping, heat sealing or force
25 fitting, the said upper rim (23) being either a plane rim (230, 233), or an inclined rim (231, 234), or a rolled rim (232, 235), the said plane, inclined or rolled rim possibly being inside or outside the said skirt, the said outer edge (50) typically comprising a seal or a sealing

layer (54) to make a seal between the said lid (1) and the said body (2).

38. Lid according to claim 37 in which the said outer edge (50) of the said peripheral strip (5) has a
5 profile capable of cooperating with an intermediate part (24) assembled to the said upper rim (23) of the said body (2).

39. Lid according to any one of claims 1 to 38 in which a manual gripping means (14) is fixed to the said
10 lid (1), to the said dish (4) or to the said peripheral strip (5) so that there is no longer any need for a handle fixed to the said receptacle.

40. Receptacle comprising a body (2) closed by a lid (1) according to any one of claims 1 to 39.